

changes are shown explicitly in the attached "Marked Up Version Showing Changes Made."

B₁ 1. (Twice Amended) A steel for a high bearing pressure-resistant member, having a high machinability, said steel being formed of a machine structural steel comprising carbon in an amount ranging from 0.15 to 0.25% by weight, silicon in an amount of not less than 0.4 % by weight and not more than 1.23 % by weight, nickel in an amount ranging from 1 to 3 % by weight, chromium in an amount ranging from 1.2 to 3.2 % by weight, and molybdenum in an amount ranging from 0.25 to 2.0 % by weight, a total amount of chromium and molybdenum amounting to at least 2.71% by weight, said machine structural steel containing carbide precipitated under a heat treatment for spheroidizing, the carbide having an average particle size of not larger than 1 μm and the maximum particle size of not larger than 3 μm , wherein said heat treatment includes maintaining said machine structural steel at a temperature ranging from 700 to 820 °C, and cooling said machine structural steel to a temperature of 600°C at a cooling rate of not higher than 20 °C per one hour.

B₂ 4. (Twice Amended) A high bearing pressure-resistant member made of a steel which has a high machinability and is formed of a machine structural steel comprising carbon in an amount ranging from 0.15 to 0.25% by weight, silicon in an amount of not less than 0.4 % by weight and not more than 1.23 % by weight, nickel in an amount ranging from 1 to 3 % by weight, chromium in an amount ranging from 1.2 to 3.2 % by weight, and molybdenum in an amount ranging from 0.25 to 2.0 % by weight, a total amount of chromium and molybdenum amounting to at least 2.71% by weight, said machine structural steel containing carbide precipitated under a heat treatment for spheroidizing, the carbide having an average particle size of not larger than 1 μm and the maximum particle size of not larger than 3 μm ,

wherein said machine structural steel undergoes one of a first treatment and a second treatment after the spheroidizing heat treatment, said first treatment including hardening the machine structural steel by carburizing, and tempering the hardened machine structural steel, said second treatment including hardening the machine structural steel by carbonitriding, and tempering the hardened machine structural steel, wherein said heat treatment for spheroidizing includes maintaining said machine structural steel at a temperature ranging from 700 to 820 °C, and cooling said machine structural steel to a temperature of 600 °C at a cooling rate of not higher than 20 °C per one hour.

5. (Twice Amended) A method of producing a steel for a high bearing pressure-resistant member, having a high machinability, said method comprising:

preparing a machine structural steel comprising carbon in an amount ranging from 0.15 to 0.25% by weight, silicon in an amount of not less than 0.4 % by weight and not more than 1.23 % by weight, nickel in an amount ranging from 1 to 3 % by weight, chromium in an amount ranging from 1.2 to 3.2 % by weight, and molybdenum in an amount ranging from 0.25 to 2.0 % by weight, a total amount of chromium and molybdenum amounting to at least 2.71 % by weight; and

applying a heat treatment for spheroidizing on said machine structural steel so that carbide is precipitated in said machine structural steel, the carbide having an average particle size of not larger than 1 μm and the maximum particle size of not larger than 3 μm, said heat treatment including maintaining said machine structural steel at a temperature ranging from 700 to 820 °C, and cooling said machine structural steel to a temperature of 600 °C at a cooling rate of not higher than 20 °C per one hour.

7. (Twice Amended) A method of producing a high bearing pressure-resistant member, having a high machinability, said method comprising:

preparing a machine structural steel comprising carbon in an amount ranging from 0.15 to 0.25% by weight, silicon in an amount of not less than 0.4 % by weight and not more than 1.23 % by weight, nickel in an amount ranging from 1 to 3 % by weight, chromium in an amount ranging from 1.2 to 3.2 % by weight, and molybdenum in an amount ranging from 0.25 to 2.0 % by weight, a total amount of chromium and molybdenum amounting to at least 2.71% by weight;

applying a heat treatment for spheroidizing on said machine structural steel so that carbide is precipitated in said machine structural steel, the carbide having an average particle size of not larger than 1 μm and the maximum particle size of not larger than 3 μm , said heat treatment including maintaining said machine structural steel at a temperature ranging from 700 to 820 °C; and cooling said machine structural steel to a temperature of 600 °C at a cooling rate of not higher than 20 °C per one hour;

machining said machine structural steel to have predetermined shape and dimensions; and

applying one of a first treatment and a second treatment on said machine structural steel after the machining, said first treatment including hardening said machine structural steel by carburizing, and tempering said hardened machine structural steel, said second treatment including hardening said machine structural steel by carbonitriding, and tempering said hardened machine structural steel.

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20. (Amended) A steel for a high bearing pressure-resistant member, 14 having a high machinability, said steel being formed of a machine structural steel comprising carbon in an amount ranging from 0.15 to 0.25% by weight, silicon in a relatively small amount of not less than 0.4 % by weight, nickel in an amount ranging from 1 to 3 % by weight, chromium in an amount ranging from 1.2 to 3.2 % by weight, and molybdenum in an amount ranging from 0.25 to 2.0 % by weight, said machine structural steel containing carbide precipitated

under a heat treatment for spheroidizing, wherein the total amount of chromium and molybdenum and the conditions of spheroidizing heat treatment are selected such that the carbide has an average particle size of not larger than 1 μm and a maximum particle size of not larger than 3 μm , wherein said heat treatment includes maintaining said machine structural steel at a temperature ranging from 700 to 820 $^{\circ}\text{C}$, and cooling said machine structural steel to a temperature of 600 $^{\circ}\text{C}$ at a cooling rate of not higher than 20 $^{\circ}\text{C}$ per one hour.

By